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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,494	09/16/2003	Lars von Goes	514862000900	4697

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MORRISON & FOERSTER LLP
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EXAMINER

OLSEN, KAJ K

ART UNIT	PAPER NUMBER
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1753

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/664,494

Applicant(s)

GOES ET AL.

Examiner

Kaj K. Olsen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9-16-2003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. In claim 4, there is no antecedent basis for the term "the inner space".
4. Regarding claim 7, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Becker et al (USP 4,049,503).

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7. Becker discloses a sensor holder for a sensor detecting a component in a gas flow. The sensor holder comprises a recess for a sensor (fig. 1) and a body 9. The body is provided with channels (10, 11, 13) for the gas flow. With respect to the limitation requiring the flowing gas be stabilized with regard to the temperature of the body, this limitation does not appear to further define any structure of the body itself because the degree of stabilization of the gas temperature entire depends on the unspecified difference between the gas temperature and the body temperature. For example, if the temperature of the gas (T_1) and the temperature of the body (T_2) are very close to each other, then any body having non-vanishing length channels would cause the temperature of the gas to gravitate towards temperature T_2 (i.e. stabilize) because basic thermodynamics dictates that heat always flows from hot to cold so as to establish thermal equilibrium. The examiner would also note that claim 1 doesn't even require the gas to have been at a different temperature than that of the body. Absent any specifically defined structure that allowed the body to stabilize the temperature of the gas, this limitation does not further define the invention. It is noted that Becker shows that the various channels have significant length and would thereby provide some degree of temperature stabilization because thermodynamics dictates that any temperature difference between a gas and body would be driven towards equilibrium.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Kirchnavy et al (USP 5,728,289).

10. With respect to the claims 3 and 9, Becker set forth all the limitations, but did not explicitly recite that the body or a lid 1 is constructed of electrically conductive material.

Kirchnavy teaches that the body and gas inlet and outlet channels (22, 24) should all be constructed of metal because metal both provides electrical shielding and has a high thermal conductivity that thermally equilibrates the gas and sensor. See col. 3, ll. 37-64 and col. 6, ll. 11-

14. It would have been obvious to one of ordinary skill in the art at the time the invention was being made to construct the lid and body of Becker out of metal, as taught by Kirchnavy, so that the sensor can be better shielded from electrical interference and so that the gases can be thermally equilibrated.

11. With respect to claim 8, Kirchnavy also discloses the use of a thermistor to monitor the temperature of the sensor. See col. 5, ll. 32-44. It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize this teaching of Kirchnavy so that the temperature of the device can be monitored.

12. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Mallory (USP 6,579,432).

13. Becker set forth all the limitations of the claims, but did not explicitly recite the channels and plate configuration of the claim 4. Mallory teaches that conventional inlets for gas sensors (like the inlet of Becker) are susceptible to being blocked by objects or by water condensation. Mallory teaches minimizing this by utilizing a combination of a plate 7 and a membrane 20

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(which would read on the defined other plate of the claim) that has gas channels 5 between them and at least one inlet hole 2 for the gas leading to the inner space where the sensor is positioned. See fig. 6 and col. 5, ll. 21-35. It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the teaching of Mallory for the sensor holder of Becker so that the gas inlet hole doesn't get clogged.

14. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Mallory as applied to claim 5 above, and further in view of Oswin et al (USP 3,925,183).

15. The references set forth all the limitations of the claim, but did not explicitly disclose the use of channels in the form of a coil or maze or the like. Oswin teaches that other configurations for gas channels are known in the art including the use of a tortuous path 28d. See fig. 4. This tortuous path would read on both "a maze" and "or the like" of claim 7. It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the teaching of Oswin for the holder of Becker and Mallory because the substitution of one configuration of gas channels for another requires only routine skill in the art.

16. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Kirchnavy as applied to claim 9 above, and further in view of Zhuiykov et al (USP 6,093,295).

17. The references set forth all the limitations of the claims, but did not explicitly disclose the use of an electrically conductive gasket. Becker disclosed that the lid 1 and body 9 can be brought together (col. 6, ll. 50-55), but didn't specify any means of fastening these two elements together. Zhuiykov discloses that the fastening of two elements in a gas sensor together can be accomplished with a gasket utilizing a metal washer. See fig. 4 and 5b and col. 10, ll. 35-45. It would have been obvious to one of ordinary skill in the art at the time the invention was being

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made to utilize the fastening means of Zhuiykov for the unspecified fastening means of Becker and Kirchnavy so that that a suitable gas tight seal can be established.

18. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Martell et al (USP 5,744,697).

19. Becker set forth all the limitations of the claim, but did not specify how the sensor is fitted into the holder (presumably it is just press fit in). To the applicant's benefit, the examiner will not interpret the unspecified fitting as reading on the broadly defined "locking means" of the claims. However, Martell discloses that a snap-fit connection can be utilized to fasten together a sensor and its corresponding cover. See col. 3, ll. 20-30. A snap-fit connection would read on the broadly defined "locking means" of the claim. It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize a lock means, such as a snap-fitting so that the sensor is connected is securely mounted to sensor holder.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaj Olsen whose telephone number is (571) 272-1344. The examiner can normally be reached on Monday through Friday from 8:00 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen, can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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March 29, 2007



KAJ K. OLSEN
PRIMARY EXAMINER